Most frequently analytical signal has a peak shape. There are a few ways for characteristic of the properties of peaks. Sometimes the method of the statistical moments of distribution is used. The general way of the detailed characteristic of peak properties bases on the use of characteristic points on a peak contour located at the certain levels (contour method). The peak shape can also be characterized by the parameters of a triangular frame formed by the tangents at the inflection points and the asymptotes to peak branches (tangent method). Early systematic comparison of various approaches to peak evaluation has been carried out. In this work some methodical aspects of application of evaluation techniques for discrete peak-shaped signals will be considered.

Some methodical aspects connected with feature of signals parameters calculation in these approaches are considered. Influence of a degree of digitization, noise level, a base line variation, and signals overlapping on stability of parameters calculation of all studied ways is investigated.

It is shown, that the error of a base line subtraction can essentially influence on values of the statistical moments and introduce the errors into calculation of them, especially, at the small analyte concentration.

The main problem of application of the contour method is connected with determination of a point of a peak maximum. Let us note, that the most convenient calculation way of an abscissa of peak maximum points is to estimate the value of abscissa at equality to zero of the first derivative function of peak.

At calculation of triangular frame parameters of the discrete signal the abscissa of inflection points of peak branches are determined by the value of abscissa at equality to zero of the second derivative function of peak. Feature of the tangent method is that the error of estimation of inflection points insignificantly affects on calculation of other parameters of triangular frame. Therefore, application of the tangent method at an estimation of size, for example, overlapped signals is especially justified.

It is necessary to note that application of derivatives for correct calculation of parameters of a peak frame and a maximum point requires full suppression of noise.